**Workshop Title**

**Workshop Lead: Maximiliane Jousse**

**Registration link: NA**

**Approximate duration: 2 hours**

**Prerequisites:**

1. **R, RStudio**
2. **Basic knowledge of linear algebra, basic statistics, mathematical operations, and logical statements**

**Summary: This workshop is delivered in 6 modules and aims to get the user comfortable with basic R. It goes through installing R and Rstudio, learning about operators and data structures, functions, packages, and basics of data manipulation, including with dplyr, tidyr and visualisation with ggplot2.**

**Learning Objectives:**

1. **Get familiar with R**
2. **Data structures**
3. **Creating functions**
4. **Basic data manipulation**
5. **Data frame manipulation with dplyr**
6. **Basic visualization with ggplot2**

**Content:**

1. **Module 1 (20 minutes)**
   1. Downloading Repo
   2. Installing R, Rstudio
   3. Overview of RStudio, basic coding
   4. Hands-on activity (5 minutes)
2. **Module 2 (20 minutes)**
   1. Operators
   2. Data structures
   3. Vectorized arithmetic
   4. Hands-on activity 2 (10 minutes)
3. **Module 3 (20 minutes)**
   1. Ifelse
   2. While and for loops
   3. Functions
   4. Hands-on activity 2 (10 minutes)
4. **Module 4 (20 minutes)**
   1. Read write
   2. Exploring data frames
   3. Hands-on activity 2 (15 minutes)
5. **Module 5 (20 minutes)**
   1. Exploring data frames with dplyr
   2. Other packages
   3. Hands-on activity 2 (15 minutes)
6. **Module 6 (20 minutes)**
   1. Base R plots
   2. Ggplot2
   3. Hands-on activity 2 (20 minutes)